

## WEST Search History





DATE: Tuesday, March 08, 2005

**Hide? Set Name Query****Hit  
Count***DB=PGPB,USPT,USOC,EPAB,DWPI; PLUR=YES; OP=ADJ*

<input type="checkbox"/>	L1	liu-c\$.in. or mazumder-A\$.in. or Brush-C\$.in. or johnson-T\$.in.	7580
<input type="checkbox"/>	L2	hydrogel same probe	353
<input type="checkbox"/>	L3	L2 and (hybridiz\$ near target)	87
<input type="checkbox"/>	L4	L2 and (hybridiz\$ near (target or nucleic acid or protein or DNA or RNA))	116
<input type="checkbox"/>	L5	L4 and (photocycloaddition)	3
<input type="checkbox"/>	L6	L2 and photocycloaddition	10
<input type="checkbox"/>	L7	L6 and (nucleic acid or protein or DNA or RNA)	10
<input type="checkbox"/>	L8	L1 and L2	14
<input type="checkbox"/>	L9	photocycloaddition	196
<input type="checkbox"/>	L10	L9 and (hydrogel or polyacrylamide or polyurethane)	62
<input type="checkbox"/>	L11	L10 and probe	37
<input type="checkbox"/>	L12	L11 and @pd > 20050308	0
<input type="checkbox"/>	L13	L11 and binding pair	4
<input type="checkbox"/>	L14	L11 and fluorophore	0
<input type="checkbox"/>	L15	L11 and (fluorophore or biotin or digoxigenin or bromouridine)	0
<input type="checkbox"/>	L16	L11 and (fluorophore or biotin or digoxigenin or bromouridine)	49
<input type="checkbox"/>	L17	L11 and (fluorophore or biotin or digoxigenin or bromouridine)	28

END OF SEARCH HISTORY

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1655CXW

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	SEP 01	New pricing for the Save Answers for SciFinder Wizard within STN Express with Discover!
NEWS	4	OCT 28	KOREAPAT now available on STN
NEWS	5	NOV 30	PHAR reloaded with additional data
NEWS	6	DEC 01	LISA now available on STN
NEWS	7	DEC 09	12 databases to be removed from STN on December 31, 2004
NEWS	8	DEC 15	MEDLINE update schedule for December 2004
NEWS	9	DEC 17	ELCOM reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	10	DEC 17	COMPUAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	11	DEC 17	SOLIDSTATE reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	12	DEC 17	CERAB reloaded; updating to resume; current-awareness alerts (SDIs) affected
NEWS	13	DEC 17	THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15	DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16	JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	18	FEB 10	STN Patent Forums to be held in March 2005
NEWS	19	FEB 16	STN User Update to be held in conjunction with the 229th ACS National Meeting on March 13, 2005
NEWS	20	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
NEWS	21	FEB 28	BABS - Current-awareness alerts (SDIs) available
NEWS	22	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	23	MAR 02	GBFULL: New full-text patent database on STN
NEWS	24	MAR 03	REGISTRY/ZREGISTRY - Sequence annotations enhanced
NEWS	25	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS EXPRESS			JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
NEWS INTER			General Internet Information
NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
NEWS WWW			CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may

result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 14:13:00 ON 08 MAR 2005

=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'STNGUIDE' ENTERED AT 14:13:04 ON 08 MAR 2005

USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE

AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Mar 4, 2005 (20050304/UP).

=> FILE .BIOTECH CAPLUS

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.06

0.27

FILES 'MEDLINE, BIOTECHDS, EMBASE, BIOSIS, SCISEARCH, CANCERLIT, CAPLUS'

ENTERED AT 14:13:22 ON 08 MAR 2005

ALL COPYRIGHTS AND RESTRICTIONS APPLY. SEE HELP USAGETERMS FOR DETAILS.

7 FILES IN THE FILE LIST

=> S PHOTOCYCLOADDITION

L1 4897 PHOTOCYCLOADDITION

=> S L1 AND HYDROGEL

L2 10 L1 AND HYDROGEL

=> S L1 AND (PROBE# OR TARGET OR NUCLEIC ACID OR PROTEIN OR POLYPEPTIDE)

L3 103 L1 AND (PROBE# OR TARGET OR NUCLEIC ACID OR PROTEIN OR POLYPEPTIDE)

=>

=> s l3 and hydrogel

L4 7 L3 AND HYDROGEL

=> d ibib abs l4 1-7

L4 ANSWER 1 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

ACCESSION NUMBER: 2003-10657 BIOTECHDS

TITLE: Detection of **target nucleic acid**  
or **protein** on chip based DNA microarrays, involves  
contacting first member of binding pair with second member of  
binding pair comprising fluorophore, and detecting the  
fluorophore;

DNA microarray for **target nucleic acid** or **protein** detection

AUTHOR: LIU C; MAZUMDER A; BRUSH C K; JOHNSON W T

PATENT ASSIGNEE: LIU C; MAZUMDER A; BRUSH C K; JOHNSON W T

PATENT INFO: US 2002146730 10 Oct 2002

APPLICATION INFO: US 2001-25185 19 Dec 2001

PRIORITY INFO: US 2001-25185 19 Dec 2001; US 1999-344620 25 Jun 1999

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2003-237971 [23]

AN 2003-10657 BIOTECHDS

AB DERWENT ABSTRACT:

NOVELTY - Detecting a **target nucleic acid**

or **protein**, comprising providing a **target** containing

a **nucleic acid** or **protein** and a first member of a binding pair; hybridizing the **target** to a **probe** attached to a **hydrogel** matrix through a 2+2 **photocycloaddition**, contacting the first member of the binding pair with a second member of the binding pair comprising a fluorophore, and detecting the fluorophore, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a kit for detecting a **target nucleic acid** or **protein** comprising a **hydrogel** matrix, a **probe** and two members of binding pair.

BIOTECHNOLOGY - Preferred Method: The **nucleic acid** is synthesized by producing cDNA from mRNA, cDNA or cRNA from a DNA. The **target** is synthesized by incorporating the first member of a binding pair into the **nucleic acid** by polymerization. At least one of the second members of the binding pair is contacted with an antibody comprising a first member. Preferred Component: The first member comprises biotin (preferred), digoxigenin, or bromouridine. The second member comprises avidin, streptavidin (preferred), biotin antibody, digoxigenin antibody, or bromouridine antibody. The **protein** is cell lysate. The **probe** comprises a reactive site capable of undergoing a 2+2 **photocycloaddition**. The **hydrogel** matrix comprises a reactive site capable of undergoing a 2+2 **photocycloaddition**. The streptavidin is attached preferably to three to four fluorophore. The fluorophore is cyanine dyes or ALEXA FLOUR (RTM) dyes. The cyanine dye is Cy-3, Cy-5, or Cy-5.5. The ALEXA FLOUR (RTM) dye is ALEXA-532 (RTM), ALEXA-647 (RTM) (preferred), or ALEXA-633. The antibody is biotinylated anti-streptavidin antibody.

USE - For the detection of **target nucleic acid** or **protein** on chip based DNA microarrays.

ADVANTAGE - The invention provides a high-sensitivity **target** detection methods for use with **hydrogel** microarrays that provide a good signal to noise ratio. (12 pages)

L4 ANSWER 2 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

ACCESSION NUMBER: 2002-14847 BIOTECHDS

TITLE: Performing expression/single nucleotide polymorphism microarray to determine presence of **target**, by contacting **target** with microarray formed by attaching **probe** to support by **photocycloaddition** and scanning microarray;  
DNA microarray, DNA chip and SNP for human and yeast gene expression analysis

AUTHOR: ELGHANIAN R; BRUSH C K; XU Y

PATENT ASSIGNEE: MOTOROLA INC

PATENT INFO: WO 2002012566 14 Feb 2002

APPLICATION INFO: WO 2000-US24894 9 Aug 2000

PRIORITY INFO: US 2000-232305 12 Sep 2000

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2002-434869 [46]

AN 2002-14847 BIOTECHDS

AB DERWENT ABSTRACT:

NOVELTY - Performing (M) expression/single nucleotide polymorphism microarray to detect presence of **target** (I), comprises attaching **probe** which will recognize (I) to polymer-coated support by (2+2) **photocycloaddition** to form microarray (II), contacting aqueous solution of (I) with (II), to form complex between complementing targets and **probes**, and scanning (II) to determine presence of (I).

DETAILED DESCRIPTION - Performing (M) expression/single nucleotide polymorphism microarray to detect presence of **target** (I), comprises attaching **probe** which will recognize (I) to polymer-coated support by (2+2) **photocycloaddition** to form microarray (II), contacting aqueous solution of (I) with (II), to form complex between complementing targets and **probes**, and scanning (II) to determine presence of (I). In (M), the **target** solution comprises an aqueous buffer solution and the **target**, and optionally an active enzyme, and a labeled carrier.

BIOTECHNOLOGY - Preferred Method: (M) further comprises application of a **probe** standard to the polymer-coated support. The **probe** and **probe** standard are applied to the polymer-coated support in about equal amounts, on a weight basis. The aqueous **target** solution further comprises a **target** standard. The concentration of the **target** is determined through comparison of the fluorescence intensities of the **target** and **target** standard. The **target** standard is selected from yeast mRNA and bacterial mRNA, or their combination. Scanning occurs in a spectrometer capable of measuring and recording fluorescence intensity and position. The aqueous **target** solution comprises a buffer capable of maintaining pH from about 6-9, an active enzyme (such as thermosequansase) that is capable of transferring a label to a **probe/target** complex by single base extension, and a fluorescently labeled carrier (such as di-deoxynucleotide triphosphate) which provides a transferable label to an active enzyme for transfer to a **probe/target** complex by single base extension. The **target** is a labeled **nucleic acid**, and the label is selected from Cy-3, Cy-5, Cy-5.5, and ALEXA FLUOR (RTM), preferably Cy-3. (M) further comprises developing the microarray after application of the **target** solution, where the developing lasts from 1 minute-42 hours, preferably 16 hours. Developing occurs between 30 and 45degreesC, preferably 37degreesC. Developing lasts for 30-60, preferably 40-50 heating/cooling cycles. (M) further comprises washing with an aqueous wash after developing, where the aqueous wash contains a buffer which comprises phosphate and sodium chloride and is capable of maintaining pH from 6-9. The aqueous wash is performed between 40 and 70degreesC, preferably 50 and 60degreesC. The solid support is a material selected from nylon, polystyrene, glass, latex, polypropylene, and activated cellulose, or their, preferably a glass. The polymer coated support is a **hydrogel** microarray formed by crosslinking a **hydrogel** simultaneous with the attachment of **probe**. The **hydrogel** microarray is prepared by first crosslinking a **hydrogel** prior to attachment of the **probe**. A photosensitizer such as anthroquinone-2-sulfonic acid is added during attachment of the **probe**. The polymer is a polymer, reactive polymer, or copolymer made of at least two co-monomers where at least one of the co-monomers can undergo (2+2) **photocycloaddition**, or a copolymer chemically modified to contain a reactive group that undergoes (2+2) **photocycloaddition**. The polymer or reactive prepolymer contains polyacrylamide. The **probe** comprises a **nucleic acid** fragment containing less than about 1000 nucleotides, and further optionally comprises a linker which is an organic chain of about 6-100 atoms in length. The **nucleic acid** fragment is selected from synthetic nucleotides and modified nucleotides or their combinations. The **probe** is cDNA, and is chemically modified to contain a reactive group that undergoes (2+2) **photocycloaddition**. The **probe** is chemically modified with a phosphoramidite which is chemically functionalized with a reactive site capable of undergoing (2+2) **photocycloaddition**. The phosphoramidite is functionalized with a cinnamide. The **probe** inherently contains a reactive site that undergoes (2+2) **photocycloaddition**. The reactive site present on the polymer and/or the reactive site present on the **probe(s)** contains an alkene group. The reactive site present on the polymer and/or the reactive site present on the **probe** is selected from dimethyl maleimide, maleimide, thymine, polythymine, acrylate, cinnamate, and citraconimide or their combinations.

USE - (M) is useful for performing expression microarray or single nucleotide polymorphism microarray to determine the presence of a **target**, where the **target** is a labeled **nucleic acid** selected from mRNA, RNA, DNA, amplified RNA, amplified DNA, or its modifications, preferably mRNA, RNA, or DNA (claimed). (M) is useful for performing gene analyses including expression and single nucleotide polymorphism.

ADVANTAGE - (M) is a sensitive method for performing expression microarray or single nucleotide polymorphism microarray to determine the presence of a **target**.

EXAMPLE - The cRNA targets for gene expression monitoring on

expression microarray chip were either total RNA or poly(A) mRNA that were amplified and biotin-labeled. poly(A) RNA were converted into double-strand cDNA using T7-d (T)24 oligo primer and SUPERSCRIPT (RTM) choice system. In vitro transcription was performed on those T7 promoter added dsDNA by using T7 transcriptase. The biotin labeled cRNA was purified and quantitated. The expression chips were then hybridized using biotin labeled cRNA targets in the concentration of 0.08 microg/microl of buffer containing MOTOROLA HYBRIDIZATION (RTM) buffer. The array was then washed with an aqueous buffer containing TRIZMA (RTM), sodium chloride and TWEEN-20 (RTM). The chips were then scanned with a Axon Series A scanner. The gene expression assay was performed using biotin-labeled cRNA generated from human placenta, brain, and heart mRNA. Ten 30 mer human gene expression **probes** which gave different expression levels and ten yeast **probes** were built on the chip. The targets were prepared using human mRNA with different ratios of yeast mRNA added for monitoring the sensitivity and dynamic range of the platform performances. The microarray detected gene expression at three copy per cell sensitivity. (34 pages)

L4 ANSWER 3 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN

ACCESSION NUMBER: 2001-06902 BIOTECHDS

TITLE: Composition for attachment of biomolecules to solid supports, polymer hydrogels, and **hydrogel** arrays, comprises using **photocycloaddition** between reactive sites on the support and biomolecules;  
DNA immobilization to solid support

AUTHOR: Johnson T; McGowen J; Beuhler A; Brush C K; Lajos R E

PATENT ASSIGNEE: Motorola

LOCATION: Schaumburg, IL, USA.

PATENT INFO: WO 2001001143 4 Jan 2001

APPLICATION INFO: WO 2000-US17422 23 Jun 2000

PRIORITY INFO: US 1999-344620 25 Jun 1999

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: WPI: 2001-168320 [17]

AN 2001-06902 BIOTECHDS

AB A composition comprising solid supports, optionally polymer-coated, attached to biomolecules by 2 + 2 cycloaddition between reactive sites on the support or polymer and the biomolecules is new. The biomolecule comprises a **nucleic acid** fragment containing less than 1,000 nucleotides and optionally further contains a spacer region. The solid support is nylon, polystyrene, glass, latex, polypropylene or activated cellulose, e.g. a bead, membrane, microwell, centrifuge tube or slide. In an example, copolymer polyacrylamide coglycidyl methacrylate was modified with acrylic acid to form a photoreactive polyacrylamide reactive prepolymer. This was coated on a solid support and exposed to UV radiation to photocrosslink in an array pattern of 100 um diameter pads spaced at 300 um pitch. The unexposed polymer was washed away, leaving a grid of **hydrogel** pads. The pads contained unreacted acrylate functional groups as attachment sites for biomolecules. (46pp)

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:511934 CAPLUS

DOCUMENT NUMBER: 139:65764

TITLE: Use and evaluation of a [2+2]  
**photocycloaddition** in immobilization of oligonucleotides on a three-dimensional **hydrogel** matrix

INVENTOR(S): Elghanian, Robert; Brush, Charles K.; Xu, Yanzheng

PATENT ASSIGNEE(S): Amersham Biosciences AB, USA

SOURCE: U.S. Pat. Appl. Publ., 11 pp., Cont.-in-part of U.S. Ser. No. 344,620.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003124525	A1	20030703	US 2001-928250	20010809
US 6664061	B2	20031216		
US 6372813	B1	20020416	US 1999-344620	19990625
US 2002146730	A1	20021010	US 2001-25185	20011219
US 2003096265	A1	20030522	US 2002-185279	20020628
WO 2003014392	A2	20030220	WO 2002-IB4038	20020809
WO 2003014392	A3	20031106		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:  
US 1999-344620 A2 19990625  
US 2000-224070P P 20000809  
US 2000-232305P P 20000912  
US 2001-928250 A2 20010809

AB The present invention provides solid supports (e.g., glass) and polymer hydrogels (particularly polymer **hydrogel** arrays present on a solid support) comprising one or more reactive sites for the attachment of biomols., as well as biomols. comprising one or more reactive sites for attachment to solid supports and polymer hydrogels. The invention further provides novel compns. and methods for the preparation of biomols., solid supports, and polymer hydrogels comprising reactive sites. The invention also provides for preparation of crosslinked solid supports, polymer hydrogels, and **hydrogel** arrays, wherein one or more biomols. is attached by means of the reactive sites in a **photocycloadn.** reaction. Advantageously, according to the invention, crosslinking of the **hydrogel** and attachment of biomols. can be done in a single step. Genes having different expression levels were measured simultaneously using biotin-labeled cRNA generated from human placenta, brain, and heart mRNA. The microarray could detect gene expression at 3 copy per cell.

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:778614 CAPLUS

DOCUMENT NUMBER: 137:275329

TITLE: **Hydrogel**-based microarray signal amplification methods and devices therefor

INVENTOR(S): Liu, Chang-Gong; Mazumder, Abhijit; Brush, Charles K.; Johnson, W. Travis

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 928,250.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002146730	A1	20021010	US 2001-25185	20011219
US 6372813	B1	20020416	US 1999-344620	19990625
US 2003124525	A1	20030703	US 2001-928250	20010809
US 6664061	B2	20031216		

PRIORITY APPLN. INFO.:  
US 1999-344620 A2 19990625  
US 2001-928250 A2 20010809  
US 2000-224070P P 20000809  
US 2000-232305P P 20000912

AB Methods and devices for detecting **nucleic acid** and **protein** targets on **hydrogel** microarrays are disclosed. Fluorophores are incorporated into the targets and detected. A linear

correlation between **target** concentration and signal amplitude is maintained through the elimination of active enzyme amplification.

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:123274 CAPLUS  
DOCUMENT NUMBER: 136:162315  
TITLE: Oligonucleotide microarrays prepared by [2+2] **photocycloaddition** and their use for SNP detection and gene expression analysis  
INVENTOR(S): Elghanian, Robert; Brush, Charles K.; Xu, Yanzheng  
PATENT ASSIGNEE(S): Motorola, Inc., USA  
SOURCE: PCT Int. Appl., 34 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 5  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012566	A2	20020214	WO 2001-US24894	20010809
WO 2002012566	A3	20030109		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2001079244	A5	20020218	AU 2001-79244	20010809
EP 1307414	A2	20030507	EP 2001-957507	20010809
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			US 2000-224070P	P 20000809
			US 2000-232305P	P 20000912
			WO 2001-US24894	W 20010809

AB Oligonucleotide microarrays prepared by [2+2] **photocycloaddn.** between suitably modified oligonucleotides and polymer- or **hydrogel**-coated substrate are disclosed. Thus, [2+2]photo-attachable functional groups were incorporated in polyacrylamide-based hydrogels and synthetic oligonucleotide **probes**. The **probes** were photochem. attached by covalent bonding to the three dimensional surface of the **hydrogel**. The resultant **hydrogel** microarrays were used for detection of specific **target** oligonucleotides, including mRNA and DNA, and are suitable for gene expression and single nucleotide polymorphism analyses.

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:12732 CAPLUS  
DOCUMENT NUMBER: 134:68455  
TITLE: Methods and compositions for attachment of biomolecules to solid supports, hydrogels, and **hydrogel** arrays  
INVENTOR(S): Johnson, Travis; McGowen, John; Beuhler, Allyson; Brush, Charles Kimball; Lajos, Robert Emil  
PATENT ASSIGNEE(S): Motorola Inc., USA  
SOURCE: PCT Int. Appl., 46 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 5  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------



WO 2001001143	A2	20010104	WO 2000-US17422	20000623
WO 2001001143	A3	20010308		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6372813	B1	20020416	US 1999-344620	19990625
CA 2378072	AA	20010104	CA 2000-2378072	20000623
EP 1190254	A2	20020327	EP 2000-941693	20000623
EP 1190254	B1	20040915		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003524150	T2	20030812	JP 2001-507097	20000623
AU 768326	B2	20031211	AU 2000-56362	20000623
AT 276516	E	20041015	AT 2000-941693	20000623
US 2003078314	A1	20030424	US 2001-976986	20011011
US 6686161	B2	20040203		

PRIORITY APPLN. INFO.:

US 1999-344620	A	19990625
WO 2000-US17422	W	20000623

AB The present invention provides solid supports (e.g., glass) and polymer hydrogels (particularly polymer **hydrogel** arrays present on a solid support) comprising one or more reactive sites for the attachment of biomols., as well as biomols. comprising one or more reactive sites for attachment to solid supports and polymer hydrogels. The invention further provides novel compns. and methods for the preparation of biomols., solid supports and polymer hydrogels comprising reactive sites. The invention also provides for preparation of crosslinked solid supports, polymer hydrogels, and **hydrogel** arrays, wherein one or more biomols. is attached by means of the reactive sites in a **photocycloaddn.** reaction. Advantageously, according to the invention, crosslinking of the **hydrogel** and attachment of biomols. can be done in a single step. Photopolymer polyacrylamide co-N-(6-acryloylhexyl)-2,3-dimethylmaleimide was prepared. This polymer is coated on a solid support and exposed to UV radiation to photocrosslink and form a **hydrogel**. Unreacted maleimide functional groups in the **hydrogel** are then reacted with maleimide-functionalized DNA oligonucleotide.